

Exhibit B

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                                BusinessLayer
// BusinessLayer.cpp : Implementation of CBusinessLayer
#include "stdafx.h"
#include "layerimpl.h"
#include "BusinessLayer.h"
#include "process.h"

class layerthread : public threadFuncior
{
public:
    void startThread()
    {
        COMInitializer init;
        try
        {
            handler();
        }
        catch(...)
        {
        }
        m_threadhandle = NULL;
    }
    void handler()
    {
        long threshold;
        long nextChapterTime;
        CTime startEvent;
        CTime stopEvent;
        CTime time;
        long eventLength;
        char msg[256];

        ::OutputDebugString("\n Loop started\n");
        CBusinessLayer *pLayer = reinterpret_cast<CBusinessLayer
*>(m_tParam);
        if (pLayer)
        {
            try
            {
                time = CTime::GetCurrentTime() ;
                pLayer->get_threshold(&threshold);
                long timeData;
                pLayer->get_startEvent(&timeData);
                startEvent = timeData;
                pLayer->get_stopEvent(&timeData);
                stopEvent = timeData;

                eventLength = CTimeSpan(stopEvent -
startEvent).GetTotalSeconds() * 1000;

                sprintf(msg, "%s\n", startEvent.Format("%D:%H:%M"));
                ::OutputDebugString(msg);
                sprintf(msg, "%s\n", stopEvent.Format("%D:%H:%M"));
                ::OutputDebugString(msg);
                pLayer->put_serverTime(time.GetTime(), -1, -1, 0,
eventLength);

                if (startEvent < stopEvent &&
                    (time + CTimeSpan(threshold)) >= startEvent)
                {
                    //
                    // - Determine if it is time to kick-off the
event.
                    // - If it is, stop the loop.
                }
            }
            catch (...)
            {
            }
        }
    }
};

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after 500 milliseconds
    // - If it is NOT, go to sleep and check
    //
    _bstr_t dvdCmd = pPlayer->firstdvdCmd();
    std::string debugmsg;
    debugmsg = "first dvd command" + dvdCmd +

    "\n";

    ::OutputDebugString(debugmsg.c_str());
    while (time < startEvent )
    {
        checkCancel();
        Sleep(500);
        time = CTime::GetCurrentTime() ;

pPlayer->put_serverTime(time.GetTime(), -1, -1, 0, eventLength);
    }
    if (time <= (startEvent + CTimeSpan(1)))
    {
        pPlayer->sendCommand(dvdCmd);
        ::OutputDebugString("Process
Event");
    }
    while (time < stopEvent)
    {
        BSTR command;
        CTimeSpan lapsedTime(0);
        long title, chapter;

        if (time > startEvent)
        {
            lapsedTime = time -
startEvent;
        }
        if
(SUCCEEDED(pPlayer->GetNextPair(&nextChapterTime, &title, &chapter, &command)))
        {
            if
(lapsedTime.GetTotalSeconds() < nextChapterTime)
            {
while(lapsedTime.GetTotalSeconds() <= nextChapterTime)
            {
                checkCancel();

                sleep(500);
                time =
                lapsedTime =
time - startEvent;
                pPlayer->updateTime(lapsedTime.GetTotalSeconds(), title);
                pPlayer->put_serverTime(time.GetTime(), title, chapter, lapsedTime.GetTotalSeconds() *
1000, eventLength);
            }
        }
    }
}

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        BusinessLayer
        pPlayer->sendCommand(command);

        Sleep(500);
    }
    time =
    ::SysFreeString(command);
}
else
{
    TRACE("no more entries in
    the chapter table");
    break;
}
}

::OutputDebugString("End Session");
pPlayer->endSession(NULL);
}
catch(ExceptionCanceled * pExcp)
{
    delete pExcp;
    _bstr_t msg = "Cancellation occurred";
    pPlayer->endSession(msg);
}
catch(...)
{
    _bstr_t msg = "Cancellation occurred";
    pPlayer->endSession(msg);
}
}

};

////////////////////////////////////
// CBusinessLayer
STDMETHODIMP CBusinessLayer::InterfaceSupportsErrorInfo(REFIID riid)
{
    static const IID* arr[] =
    {
        &IID_IBusinessLayer
    };
    for (int i=0; i < sizeof(arr) / sizeof(arr[0]); i++)
    {
        if (InlineIsEqualGUID(*arr[i],riid))
            return S_OK;
    }
    return S_FALSE;
}

HRESULT CBusinessLayer::FinalConstruct()
{
    HRESULT hr = CoCreateInstance(CLSID_CConfigMgrImpl,
        0,
        CLSCTX_ALL,
        IID_ICConfigMgrImpl,

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(void**)&m_pICConfigMgrImpl);
    return hr;
}

void CBusinessLayer::FinalRelease()
{
    if (m_pthread)
        m_pthread->stop();
    delete m_pthread;
    if (m_pICConfigMgrImpl)
        m_pICConfigMgrImpl->Release();
    try
    {
        if (m_pIDBConnect)
            m_pIDBConnect->Release();
    }
    catch(...)
    {
    }
}

void CBusinessLayer::ChkValidEvent()
{
    ::OutputDebugString("\n Check valid Event\n");
    m_firstTime = false;
    if (m_diskID.length() == 0)
        throw new IAUserException("Invalid Disk id");
    if (m_pICConfigMgrImpl)
    {
        std::string debugmsg;
        debugmsg = "disk id=" + m_diskID + "; location id = " + m_locationID
+ "\n";
        ::OutputDebugString(debugmsg.c_str());
        m_pICConfigMgrImpl->put_diskID(m_diskID); //
variable used for search criteria
        m_pICConfigMgrImpl->put_locationID(m_locationID); // Variable used
for search criteria
        m_pICConfigMgrImpl->get_hostType(&m_hostType);
        if (m_hostType)
        {
            // Create a DBConnector, store the pointer for future use.
            // Store values from db.
            //
            ::OutputDebugString("\n Host type is checked\n");
            HRESULT hr = S_OK;
            if (!m_pIDBConnect)
            {
                hr = CoCreateInstance(CLSID_DB_Connector,
                                0,
                                CLSCTX_ALL,
                                IID_IDB_Connector,
                                (void**)&m_pIDBConnect);
            }
            if (SUCCEEDED(hr))
        }
    }
}

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        BusinessLayer
        ::OutputDebugString("\n Initialize DB Connector\n");
        m_pIDBConnect->put_diskID(m_diskID); //
variable used for search criteria m_pIDBConnect->put_locationID(m_locationID); //
variable used for search criteria
        m_pIDBConnect->chkEvent();
        BSTR data;
        m_pIDBConnect->get_diskID(&data);
        if (data)
        {
            m_diskID = data;
            ::SysFreeString(data);
        }
        m_pIDBConnect->get_locationID(&data);
        if (data)
        {
            m_locationID = data;
            ::SysFreeString(data);
        }
        long time;
        m_pIDBConnect->get_startEvent(&time);
        m_startEvent = time;
        m_pIDBConnect->get_stopEvent(&time);
        m_stopEvent = time;
        m_pIDBConnect->get_threshold(&threshold);
        m_pIDBConnect->get_hostType(&m_hostType);

        long * nDecoderArray;
        long * nCapabilitiesArray;
        nDecoderArray = nCapabilitiesArray = NULL;

        if
(SUCCEEDED(m_pIDBConnect->decoderArray(&nDecoderArray, &nCapabilitiesArray)))
        {
            int i = 0;
            while(nDecoderArray[i] != -1)
            {
                m_capabilities[nDecoderArray[i]] =
nCapabilitiesArray[i];
                i++;
            }
            CoTaskMemFree(nDecoderArray);
            CoTaskMemFree(nCapabilitiesArray);
        }

        ::OutputDebugString("\n Prepare to start thread\n");
        m_pthread = new layerthread;
        m_pthread->start(this, false);
    }
    else
    {
        throw new COMException(hr);
    }
}
else
{
    // Create a Reference Connector, and store the pointer for
    // TBD
    //
    future use.

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        }
    }
}

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STDMETHODIMP CBusinessLayer::get_disk(BSTR* pVal)
{
    // TODO: Add your implementation code here
    *pVal = m_diskID.copy( );
    return S_OK;
}

STDMETHODIMP CBusinessLayer::put_disk(BSTR newVal)
{
    // TODO: Add your implementation code here
    m_diskID = newVal;
    return S_OK;
}

STDMETHODIMP CBusinessLayer::get_location(BSTR* pVal)
{
    // TODO: Add your implementation code here
    *pVal = m_diskID.copy( );
    return S_OK;
}

STDMETHODIMP CBusinessLayer::put_location(BSTR newVal)
{
    // TODO: Add your implementation code here
    m_locationID = newVal;
    return S_OK;
}

STDMETHODIMP CBusinessLayer::get_startEvent(long *pVal)
{
    // TODO: Add your implementation code here
    *pVal = m_startEvent.GetTime(); // m_pIDBConnect->get_startEvent(pVal);
    return S_OK;
}

STDMETHODIMP CBusinessLayer::put_startEvent(long newVal)
{
    // TODO: Add your implementation code here
    time_t time = newVal;
    m_startEvent = time;
    return S_OK;
}

STDMETHODIMP CBusinessLayer::get_stopEvent(long *pVal)
{
    // TODO: Add your implementation code here
    *pVal = m_stopEvent.GetTime(); // m_pIDBConnect->get_startEvent(pVal);
    return S_OK;
}

STDMETHODIMP CBusinessLayer::put_stopEvent(long newVal)
{
    // TODO: Add your implementation code here
    time_t time = newVal;
    m_stopEvent = time;
    return S_OK;
}

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STDMETHODIMP CBusinessLayer::get_threshold(long *pval)
{
    // TODO: Add your implementation code here
    *pval = threshold; // m_pIDBConnect->get_threshold(pval);
    return S_OK;
}

STDMETHODIMP CBusinessLayer::put_threshold(long newVal)
{
    // TODO: Add your implementation code here
    threshold = newVal;
    return S_OK;
}

HRESULT CBusinessLayer::GetNextPair(long *theTime, long *nTitle, long * nChapter,
BSTR *chapterCmd)
{
    return m_pIDBConnect->get_NextChapter(theTime,nTitle,nChapter,chapterCmd);
}

_bstr_t CBusinessLayer::firstdvdCmd()
{
    //
    // Execute the first DVD Command
    //
    BSTR msg = NULL;
    _bstr_t dvdMsg;
    m_pIDBConnect->get_initialDVDCommand(&msg);
    if (msg)
        dvdMsg = msg;
    return dvdMsg;
}

void CBusinessLayer::sendCommand(BSTR szMsg)
{
    Fire_sendCommand(szMsg);
}

void CBusinessLayer::endSession(BSTR szMsg)
{
    Fire_endSession(szMsg);
}

void CBusinessLayer::updateTime(LONG time, long nTitle)
{
    Fire_updatetime(time,nTitle);
}

STDMETHODIMP CBusinessLayer::Initialize()
{
    HRESULT hr = S_OK;
    try
    {
        chkValidEvent();
    }
    catch(IAUserException *pexcpt)

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        BusinessLayer
    {
        delete pexcpt;
        hr = E_FAIL;
        _bstr_t msg = "USER exception occurred\n";
        Fire_endSession(msg);
    }
    catch(COMException * pcomexcpt)
    {
        hr = pcomexcpt->operator HRESULT();
        _bstr_t msg = "COM exception occurred\n";
        Fire_endSession(msg);
    }
    catch(...)
    {
        _bstr_t msg = "unknown exception occurred\n";
        Fire_endSession(msg);
    }

    return hr;
}

STDMETHODIMP CBusinessLayer::TranslateTimePlay(long nDecoderType, long nTitle, long
nTime, BSTR *szCmd)
{
    // TODO: Add your implementation code here
    HRESULT hr = E_FAIL;
    decoderCapabilities::iterator it = m_capabilities.find(nDecoderType);
    if (it != m_capabilities.end())
    {
        if ((*it).second == 0)
        {
            char translate[_MAX_PATH];
            sprintf(translate, "tmp:%d:%d", nTitle, nTime * 1000);
            *szCmd = _bstr_t(translate).copy();
            hr = S_OK;
        }
    }

    return hr;
}

STDMETHODIMP CBusinessLayer::get_eventLength(long *pval)
{
    // TODO: Add your implementation code here
    m_timeLock.lock();
    *pval = m_eventLength.GetTime();
    m_timeLock.unlock();
    return S_OK;
}

STDMETHODIMP CBusinessLayer::get_lapsedTime(long *pval)
{
    // TODO: Add your implementation code here
    m_timeLock.lock();
    *pval = m_lapsedTime.GetTime();
    m_timeLock.unlock();

    return S_OK;
}

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STDMETHODIMP CBusinessLayer::get_chapterProperties(long *pval)
{
    // TODO: Add your implementation code here
    m_timeLock.lock();
    *pval = m_chapter;
    m_timeLock.unlock();
    return S_OK;
}

STDMETHODIMP CBusinessLayer::get_titleProperties(long *pval)
{
    // TODO: Add your implementation code here
    m_timeLock.lock();
    *pval = m_title;
    m_timeLock.unlock();
    return S_OK;
}

STDMETHODIMP CBusinessLayer::get_serverTime(long *pval)
{
    // TODO: Add your implementation code here
    m_timeLock.lock();
    *pval = m_serverTime.GetTime();
    if (*pval == 0)
    {
        char msg[1024];

        sprintf(msg, "title = %d, chapter = %d, location = %s\n", m_title,
m_chapter, m_locationID.operator char *());
        m_timeLock.unlock();

        return S_OK;
    }
}

void CBusinessLayer::put_serverTime(/*[in]*/ long serverTime, long title, long
chapter, long lapsedTime, long length)
{
    m_timeLock.lock();
    m_serverTime = serverTime;
    m_title = title;
    m_chapter = chapter;
    m_lapsedTime = lapsedTime;
    m_eventLength = length;
    m_timeLock.unlock();
}

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